ERASMUS UNIVERSITEIT ROTTERDAM
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MASTER THESIS

The effect of time-limited discounts and anticipated regret on purchase intention: Moderating effect of time pressure

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Chapter 1: Introduction

Time and emotions are two of the most significant factors that affect how consumers make decisions, which in turn affect their behavior and purchase intention. According to Reynolds, Jones, Gillison, and Musgrove (2012), persuading customers to buy products is an important marketing objective. As a result, many businesses aim to exploit "time" through their marketing efforts, offering time-limited discounts to reduce inventory, gain a better market position, outperform rivals, and enhance overall company performance. Customers' sense of urgency will be heightened by time-limited incentives, which will motivate them to act and complete their purchases more rapidly. This will eventually increase sales for the businesses. (Teng, Huang and Yeh, 2007).

Consumers may have concerns about a product's future availability or the chance of finding a better deal with a competitor throughout the decision-making process for a time-limited discounted product, which frequently results in regret. Regret influences people's decision-making in two ways: on one hand, it causes people to change a poor decision after making it (Gilovich & Medvec, 1995); on the other hand, before making a decision, consumers frequently anticipate that if the outcome is poor, they will feel anticipated regret and change their choice. (Bell, 1982; Loomes & Sugden, 1982). Research conducted by (Zeelenberg et al., 1996) shows that risk aversion would induce the predicted regret to lead to a safer choice, therefore, the researcher will investigate the importance of anticipated regret and time pressure on time-limited promotions and impact on purchase intention.

1.1)   *Research Problem and Motivation*

There are two types of time-limited discounts: monetary and non-monetary. Price reduction, according to (Choi Ji-eun, Park Jong-cheol, 2013), offers financial benefits through discounts on product pricing or value-added promotions that provide non-financial advantages through promotional tactics or free giveaways. According to (Thaler 1985), a comparatively lower price increases both the acquisition value and the transaction value, which in turn influences the overall perceived value and purchase intention. To study the effects of time constraints and limited time offers

consumers' behavioural factors which influence their purchase, anticipated regret will mediate the relationship. The significance of expected regret in decision making has drawn more study attention since the development of regret theory. (Quiggin, 1994). Due to their sensitivity to regret, consumers take precautions to minimize potential regret feelings and look forward before making purchases. (Zeelenberg and Beattie, 1997; Du et al., 2019).

Time-limited promotions may have a favorable impact on consumers' intentions to continue looking for discounts, desire to buy, and attitude about the deal, according to earlier studies. Heo Jong-ho and Joon Hwan Lee (2010) investigated the impact of the degree of time constraint on promotional impacts. Ailawadi and Neslin (1998) explored the long- and short-term effects of the promotion itself.

The effects of consumers' anticipated regret and false perceptions of product availability on the retailer's ideal pricing strategy and inventory level were examined by (Ozer and Zheng, 2016). There are no studies that show how time constraints and anticipated regret can affect consumer behavior and their decision to buy a discounted product or not, even though (Inman and McAlister, 1994) suggested that anticipated regret increases as the coupon date expiration draws closer and that subjects experienced a coupon redemption pressure as the coupon expiration date approached.

Therefore, the researcher will have the following objectives:

- To study which factors, lead to anticipated regret and how can it be minimized.
- To study how does anticipated regret play a role when consumers consider buying a discounted product with a near or far discount expiration date (time pressure)

1.2) *Managerial Relevance*

Although convincing customers to buy products is a crucial marketing objective (Reynolds, Jones, Gillison, & Musgrove, 2012), managers should consider the possibility of alienating, upsetting, confusing, or angering customers when developing their pricing strategy (Garaus, Wagner, and Kummer, 2015).

While discounted products might keep current customers engaged and pleased with the brand, if customers are under time pressure because they are getting close to the discount's expiration date and don't have enough time to evaluate the deal before buying the product to avoid regret, this will not result in loyal customers but in dissatisfied ones.

Additionally, it was examined by (Jiang et al., 2017) as to whether and how anticipated regret influences the revenue and product advancements of rival businesses. They demonstrated that businesses' earnings and product quality may be affected by expected regret in both good and bad ways, and that businesses with low-quality products are more vulnerable. When consumers tend to think about the probability of subsequently regretting their choice, the risk of anticipated regret increases. (Simonson, 1992.) (Tykocinski and Pittman, 1998) suggested that consumers try to avoid regretful thoughts by passing up the next action opportunity that will result in inferior outcomes.

In this manner, drawing on the initial research on counterfactual thinking (e.g., Kahneman & Tversky, 1979; Thaler, 1985), it is claimed that when discounts are missed, buyers are less likely to purchase a particular amount of the product because paying full price implies getting a lousy deal.

(Zeelenberg et al. 1998b, 1998c) demonstrate that regret is higher for decisions that one had control over than for those that one had less influence over. Therefore, it's crucial to research how consumers can prevent anticipated regret when thinking about making a time-limited purchase.

Given the problems stated above, the researcher will investigate the following objectives:

- To study which are the product characteristics/attributes that customers who face anticipated regret and have limited time consider before making a purchase.
- To investigate how can brands establish long-term relationships with regret averse customers who have purchased a discounted product, but the discounts have expired.

Therefore, the research question will be:

What is the influence of anticipated regret on the purchase of time-limited discounted products?

1.3)   Thesis Outline

The second section will consist of the literature review that will report and synthesize prior findings on the effects of discounts on consumer behavior and on the role of time-pressure and anticipated regret on decision making and purchase behavior. The outcome of the review will be the development of hypotheses on the relationship between the variables of interest. The third section will be the methodology which will consist in the research design, sample, procedure, reliability and the fourth section will include the results, discussion, and conclusion such as summary of results, conclusion, future recommendations.

Chapter 2. Background Theory and Conceptual Framework

Discounts are pervasive in modern markets and a crucial marketing tactic that all businesses with distinctive economic character should strengthen. Discounts come in a variety of forms, including coupons, price bundles, and in-store price reductions. Pricing is widely acknowledged in marketing literature as influencing consumers' reactions to market products (Monroe, 1973; Moyer, 1971; Simon, 1979; Dodds & Monroe, 1985; Zeithaml, 1988; Dodds, Monroe and Grewal, 1991).

Quantity discounts may affect customers' buying decisions because they boost perceptions of savings and value, since consumers favor low prices and high value (Fraccastoro, Burton & Biswas, 1993). Sales promotions are a common tool used by marketers and merchants to sway consumers' brand and purchase decisions (Ailawadi et al., 2009; Gedenk et al., 2010). Getting customers to buy your product is a crucial marketing objective (Reynolds, Jones, Gillison, & Musgrove, 2012). To get rid of their inventory, improve their market positioning, outperform their rivals, and boost corporate performance, many businesses have the objective of exploiting "time" through their marketing operations, i.e., by providing time-limited promotions.

Customers' sense of urgency is intensified by time-limited incentives, which motivates them to act and complete their purchases more rapidly. This consequently increases firm's sales (Teng, Huang and Yeh, 2007).

When deciding whether to buy a product at a time-limited price, the customer can have uncertainties about its future availability or the chance of finding a better offer from the company's rivals, which could make them regret their decision.

For example, imagine you need a pair of jeans, and you decide to scroll through your favorite's brand website. Suddenly you observe an attractive pair of jeans with a 50% discount which ends the next day. You will probably rush to buy those pair of jeans in order not to miss the offer. Now imagine you see your friend wearing a more attractive pair of jeans which cost double less than the price you paid for the discounted jeans, you might immediately regret buying your usual brand and consider reassessing different options before rushing into a purchase which is highly influenced by time-limited discounts.

Regret influences people's decision-making processes in two ways: on one hand, it causes people to correct a wrong decision after purchase (Gilovich & Medvec 1995); on the other hand, before deciding, people frequently expect that if the result is wrong, they will feel regret and change their choice (Bell, 1982; Loomes and Sugden 1982). Because (Zeelenberg 1996) demonstrated that anticipated regret leads to a safer option due to risk aversion, this study will examine the impact of anticipated regret and time pressure on time-limited promotions on consumer behavior and willingness to pay.

2.1) Theoretical Framework

Definitions

Coupons are price discount papers that are provided to a potential buyer in a variety of ways (Babakus 1988), Coca-Cola delivered the first coupon ever which offered a free beverage in 1887.

Price discounts according to (Choi Ji-eun 2013), offer financial advantages through price cuts on goods or value-added promotions that provide non-financial advantages through marketing tactics such as giveaways. (Raghubir and Corfman 1999), a price discount are defined as "reducing the price for a given quantity or increasing the amount offered at the same price, so adding value and creating an economic incentive to purchase. Price discounts represent between 16 and 30 percent of all FMCG sales in Europe, and it is still increasing (GfK and SAP Study, 2011).

Time-limited discounts have traditionally been divided into two categories: monetary promotions and non-monetary promotions (Chandon et al., 2000; Gedenk et al., 2010). Monetary discounts have a direct impact on a product's cost-benefit relationship by either lowering the price, as with temporary price cuts or coupons, or by increasing the quantity of the product a customer receives for the same price (e.g., three products for the price of two, 10% more in the package, etc.). Discounts without a direct monetary benefit are referred to as non-monetary promotions.

The idea that there is a perceived severe lack of time to fulfill critical tasks is referred to as **time pressure** (Roxburgh 2004 and Kleiner 2014). Time pressure includes both the perception of tempo (a faster pace of time) and limits/choices (the need to choose one course of action over another) (Dapkus 1985).

According to (Bettman, Luce and Payne 1998) and (Heitmann, Lehmann and Herrmann 2007), decision-makers believe that they are being judged on their choices both by other people (such as family and friends) and by themselves. To increase the accuracy of their judgment, customers strive to foresee regret and accomplish this by looking for more information.

Anticipated regret can be defined as a negative emotional reaction that individuals experience as a result of comparing the anticipated outcome of their decision of not to act with the outcome they would have experienced if they had acted (Xiling 2018).

Purchase intention is described as "the consumer's preference to purchase the good or service" (Younus, Rasheed, and Zia 2015).

2.2) Impact of discounts on consumer behavior

Time-limited discounts are an essential and effective marketing strategy. Marketing messages frequently emphasize that deals are only accessible for a short period of time, for example, "sale ends Friday" (Inman et al., 1997). In print advertisements, the "scarcity appeal" of time constraints is most frequently exploited (Howard and Kerin, 2006). Organizations utilize Marketing campaigns to increase demand for products that are thought to be scarce; as a result, consumers act quickly to make purchases out of fear of missing out (Devlin et al., 2007). Researchers have argued that marketers need a better grasp of how contextual factors like time pressure affect consumers' perceptions of value (Devlin 2007).

Regarding the psychological impacts of scarcity, commodity theory postulates that any offer will be valued to the extent that it is believed to be out-of-stock (Devlin 2007). It implies that offers with limitations, such time limits, will be more in demand by consumers.

Discounts can take several forms such as coupons, price discounts, buy get one free and giveaways.

Coupons

Coupons, according to (Nudubisi and Tung 2005), offer several advantages and tendencies in favor of marketers in a way that they can boost sales quickly and encourage buyers to switch to other brands or items. (Venkatesan and Farris 2012)

suggested that the customized coupons increase the effectiveness of marketing promotion and lead to positive financial performance. However, some researchers have shown that using coupons as a sales promotion tactic is useless, for instance, some researchers demonstrated that using coupons as sales promotion is ineffective. These studies looked at how customers responded to the significant price reductions offered by coupons because it may negatively affect the value of any product, which may have an impact on product trials (Silva-Risso and Bucklin, 2004; Gilbert and Jackaria, 2002). Other studies have suggested that customers regret purchasing coupons, for instance, Groupon reports that just over 80% of coupons are redeemed (Zmuda, 2010), leaving roughly 20% of coupons, which have been paid for in advance, unused. Even though the firm that offers the coupon benefits from this, not all customers do since the customer has no right to return or exchange the coupon after it has been purchased (Dholakia and Tsabar 2011).

Price discounts

By lowering the price for a given amount or increasing the quantity offered at the same price, price reductions increase value and generate an economic incentive to purchase (Raghubir and Corfman 1999).
Price reductions (cut-off pricing) are crucial in encouraging new customers to try the products being offered (Brandweek, 1994; Blackwell, Miniard and Engel, 2001; Fill, 2002; Shimp, 2003). Consumers are more likely to be drawn to price discount promotions, claims (Percy 2001).

Buy one get one free

Buy one get one free type promotions are a very useful strategy, especially for marketers and manufacturers that wish to clear their stock more quickly, according to (Li, Sun and Wang 2007). The free extras and bonuses influence customers' willingness to buy the product.

Samples

According to (Lammers 1991), the sampling method has a favorable relationship to a fast-selling strategy and can influence consumer willingness to buy. Other researchers agreed that the free sample technique has a favorable impact on consumers' purchasing decisions (Parmataris, 2001; Fill, 2002; Shimp, 2003).

Sales promotion, according to (Schultz 1998), have a direct impact on how customers behave. (Chandon, Wansink, and Laurent 2000) noted that in addition to price savings, there are additional factors that can affect consumer willingness to buy.

Consumers buying behavior and sales promotion can be motivated through various kinds of elements, including promotion techniques such as free samples, price discounts, social surroundings, and physical surrounding (Ghafran Ashraf 2014)

(Schindler 1998) also found that price discounts could make customers feel excited and powerful, (Honea and Dahl 2005, Peine et al 2009) found that promotion increased customers' positive affect, such as happiness.

According to (Fill 2002) marketing tactics such as price discounts have a higher significant influence on consumers' willingness to buy. Based on this, the following theory may be put forth:

H1: Purchase Intention for discounted products is higher than non-discounted products.

2.3) Impact of product promotions on anticipated regret and purchase intention

When a consumer considers potential loss prior to making a choice, it is known as anticipated regret and can result in uncertainty and doubt (Ritov and Baron, 1995).

A broad body of work proposes that groups of both positive and negative AEs toward achieving a future goal or not influence behavioral intention (Bagozzi and Dholakia, 2006; Perugini and Bagozzi, 2001, Xie 2013).

The theory of regret according to (Zeelenberg 2001) assumes that, for example, based on preferences for gains or non-losses and avoidance of losses or non-gains, people seek to avoid negative post-decisional feelings and to strive for positive post-decisional emotions. This latter perspective elucidates a set of four AEs affecting decisions: positive AEs toward action, negative AEs toward action, positive AEs toward inaction,

and negative AEs toward inaction (Bagozzi et al 2016). The existence of these four sets of AEs implies that consumers might anticipate both positive and negative affective outcomes of their actions and inactions before making decision (Bagozzi et al 2016)

According to (Mellers et al., 1999; Zeelenberg et al., 2000), there are fundamental beliefs that support consumers' propensity to seek out positive emotions and steer clear of unpleasant ones. They contend that both buying and not buying decisions have both positive and negative affective outcomes that consumers must consider.

Positive communications about purchases raise buying intention, while negative messages lower purchase intention, according to research on advertising and word of mouth (Herr, Kardes, & Kim, 1991). This perspective is in line with a significant body of consumer research that contends that stimuli influence attitudes in a manner congruent with their valence (for example, positively aroused feelings toward products result in positive attitudes and behavioral intentions) (Bagozzi, Gopinath, & Nyer, 1999; Burke & Edell, 1989).

(Kardes 1994) argued that fear of regret following a poor choice encourages excessive risk aversion. (Simonson 1992) questioned customers on the regret they would experience after making a poor choice. When faced with this choice, they were more likely to go for a potentially inferior but less hazardous product over one that would protect them from potential regret (i.e., a more expensive, well-known brand) (a less expensive, lesser-known brand).

According to research, those who underestimate their regret tend to make more careful decisions (Hamilton et al., 2017; Verkijika, 2018; Ahn and Kahlor, 2020). The findings of (Hayashi 2019) supported the idea that anticipation is one of the causes of impulsive behavior.

According to (Kahneman and Miller 1986), inaction is typically viewed as the norm, whereas action (and thus predicted regret) is connected to higher risk and responsibility and, consequently, regret.

While consumers have plenty of time to assess information, time-limited opportunities are different from time pressure in that they restrict the amount of time that may be used to act on that information (Payne, Bettman, and Johnson 1993).

Consumers are more inclined to buy something if they fear regret over losing a chance to save money (Inman and McAlister 1994; Simonson 1992). For example, in a study conducted by (Simonson 1992) he asked participants to anticipate their feelings if they

realized they had made a poor choice (i.e., passed up an attractive price because they incorrectly expected the same price to be available later). Compared to participants in a control group who were not told to anticipate regret, these respondents were more inclined to accept the current appealing pricing (63% versus 54% in the regret and control groups, respectively).

Inaction can be framed as a loss and choosing not to buy might result in the realization of that loss (Carmon, Wertenbroch, and Zeelenberg 2003). Post-choice, non-buyers will suffer more regret than buyers who, by buying, can prevent the loss and any emotions of regret.

Counterfactual thinking can help people foresee the emotional effects of hypothetical choices.

(Simonson 1992) discovered that when given the option to purchase items on sale this month knowing they will receive a flyer outlining different sale prices for the following month, consumers prefer to do so now rather than wait to avoid the possibility of regretting not purchasing the item while it was on sale this month.

Shorter time limits improve purchase intent by fostering a sense of "urgency," which is defined as a perceived need to start and finish an action in the current or near future (Sinha 1999).

As a result, the hypothesis can be drawn:

H2: Anticipated regret for discounted products is higher than non-discounted products.

2.4) Effect of time pressure on purchase intention

Time pressure is the short amount of time that consumers must look for pertinent information or make decisions (Suri and Monroe, 2003). (Svenson and Edland 1987) discovered that when consumers are under time constraints, their decision-making process differs from that of individuals who are not under time constraints. (Inman 1997) demonstrated that restricting a contract's temporal validity leads to a more favorable deal appraisal, particularly if the transaction provides sizable savings. (Inman and McAlister 1994) discovered that when the coupon expiration date drew near, respondents felt "coupon redemption pressure."

Decisions made under time constraints are likely to be of worse quality, according to both theory and empirical data. (Bettman 1979) claimed that the amount of information

that can be processed is controlled by the amount of time that is available, and (Friend 1982) showed a strong negative correlation between performance on test-solving tasks and time constraint. When the time allotted is less than the time the decision maker needs to make the decision, or when the decision maker is given a short amount of time to make the decision, the decision maker may feel under pressure, and this could affect the quality of their decision-making and their choice of strategies (Ordonez and Benson 1997).

Choices made under time constraints are likely to be poorly informed, according to a theory put out by (Bruner 1956) while a (Wright 1974) indicated that under time constraints, consumers tend to prioritize.

(Wright 1974) concluded that when under extreme time pressure, consumers attach more weight to comparatively unfavorable information than positive information when making decisions.

(Inman and McAlister 1994) investigation of coupon expiration and exchange rates revealed that the highest coupon redemption rate occurred right before the coupon's expiration date.

In other words, buyers first view the benefits of the coupon as possible gains, but as the discount's expiration date draws near, the anticipated sensation of regret grows, and the benefit of the coupon becomes a potential loss.

Limited purchasing possibilities are different from time constraints in that customers have plenty of time to assess information, but they are still a form of scarcity because they restrict the amount of time they must act on that information (Payne, Bettman, and Johnson 1993)

Customers may view a non-purchase as a forfeiture situation when there are few possibilities to buy anything since, they will miss out on the chance to acquire something valuable. Due to the increased mental capacity in forfeiture circumstances (Carmon, Wertenbroch, and Zeelenberg 2003), inaction may be interpreted as a loss, and not buying might be the realization of that loss. If this is the case, non-buyers should feel more regret after making their choice than purchasers, who may avoid the loss and any remorse by making a purchase.

Therefore, the following can be concluded:

H3a: Time pressure moderates the effect of discounts on consumer's regret, such when time-pressure is high, the effect of the discount on anticipated regret is increased.

H3b: The impact of product discounts on consumer's purchase intention of the time-limited discount product is mediated by anticipated regret.

2.5) Impact of anticipated regret on purchase intention

(Miller and Taylor 1995) investigated the relationship between prefactuals and anticipated regret and discovered that it decreased the likelihood of selling an item. The role of mental simulation in the experience of regret (both anticipated and retrospective) has been suggested by many researchers such as (Plous, 1993; Sherman and McConnell 1995). (Zeelenberg, Beattie, van der Pligt, and de Vries 1996) found that people given a choice between risky and safe behaviors will select the riskier option (violating typical risk-aversion findings) in situations where they will learn the consequence of the riskier decision regardless of their choice but will learn the consequence of the safer decision only if they choose the safer action.

Consumers who relied more heavily on their emotions while making decisions tended to be more certain about their preferences (Maglio & Reich, 2019). As a result, individuals were more inclined to defend their choice against unfavorable feedback while processing information that was essential to decision-making when they were feeling focused (Maglio & Reich, 2020).

The process of making a consumer purchase decision is full of emotion, and research has shown that emotion is a powerful indicator of future consumer behavior (Flavián-Blanco et al., 2011). Generally, customers aim to reduce any unfavorable emotions they may feel following a purchase decision (Bagozzi et al.,2016)

When making decisions, customers tend to support the choice that they find least objectionable to deal with anticipated regret (Janis and Mann, 1970).

Thus, the consumer's mental simulations of future events can influence their purchasing decisions (Davvetas and Diamantopoulos, 2018)

Consumers' memories and cognitive processes will influence not only the faulty decisions they have made in the past but also the decisions they believe to be true in the future (Shih and Schau, 2011; Davvetas and Diamantopoulos, 2018).

Regret is a particularly strong emotional response within the range of negative feelings that consumers may experience (Di Caprio et al., 2019), hence customers will typically want to avoid regrets and control their level of regret (Zeelenberg and Pieters, 2006; Pelaez et al., 2019)

Consumers attempt to reduce the potential of regret while making a purchase. (Bell, 1982)

Therefore, the following hypothesis can be deducted:

H4: Purchase intention of a discounted product is influenced by anticipated regret.

Conceptual Model
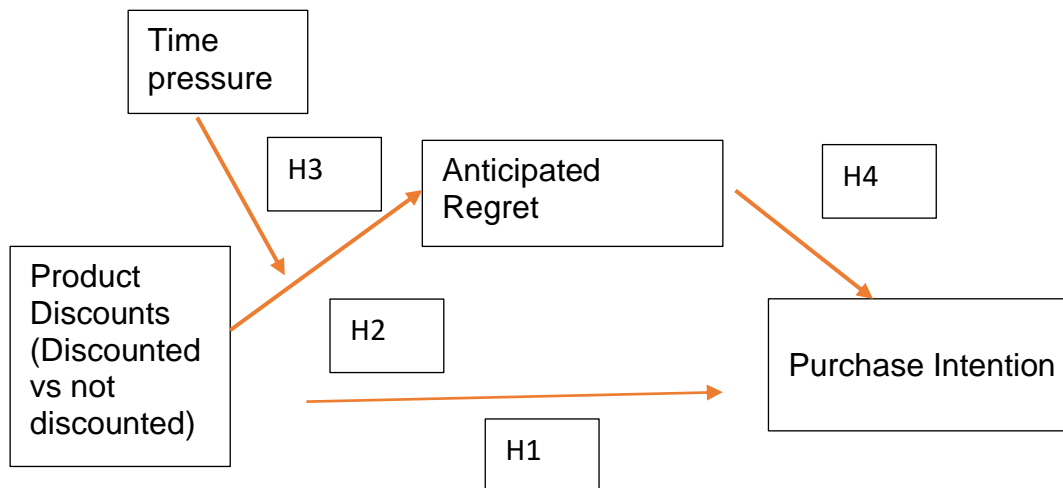
Chapter 3. Design and Methodology

The research methodology and data gathering techniques are covered in the section that follows. There will also be a summary of the participants, measurements, and study approach. The purpose of this study is to investigate which factors lead to anticipated regret and how can it be minimized and to study how does anticipated regret play a role when consumers consider buying a discounted product with a near or far discount expiration date.

3.1) Methodology

According to Hak (2013), the best technique to evaluate the causality of the hypotheses given in the literature review is through an experiment, therefore the conceptual model will be tested by using an experimental method. An online survey has been distributed since this approach will make it possible to connect with a sizable number of participants from different backgrounds, ensuring that the sample will be representative of the target group. Moreover, another advantage of the survey it allows flexibility for respondents and respondents anonymity. Because online surveys give respondents a more comfortable setting in which to respond, participants may be more ready to give honest responses, boosting the validity of the study. Since it is uncertain whether the responses given by survey participants are genuinely indicative of their behavior in a real-world shopping setting, the survey may have the drawback of decreasing the external validity.

The categorical independent variable in this study are discounts (discounted/not discounted) and time pressure which acts as a moderator (5 days low time pressure / 2 hours high time pressure). Then, there is a dependent variable, purchase intention and anticipated regret which acts a mediator.

3.2) Measurements

Variables	Measurements
Time Pressure	According to a study conducted by (1972; Baer & Oldham, 2006; Andrews & Farris) time levels were

	established. The time levels ranged from little pressure to high pressure. Therefore, the researcher will include two scenarios:
	To measure anticipated regret under time pressure, the researcher will inform the respondent that they have 5 days (little pressure) left to decide whether they should purchase the jeans, and another scenario in which they will have 2 hours left (high pressure).
Anticipated Regret	A study conducted by (Luce, Payne and Bettman 1999), anticipated regret was measured on a 7-point scale. Participants responded to the question, "How likely is it that choosing a bad flight plan will have a very unfavorable outcome?" "How hazardous (containing potential for undesirable outcomes or effects) is this flight decision for you? (1 = very unlikely; 7 = highly likely")?" "How stressful is the flight decision for you?" (1 = very little stress; 7 = high stress). Therefore, the researcher will measure anticipated regret on a 7-point Likert scale.
Discount	Respondents will be presented two different discount levels, discounted, and not discounted.
Purchase intention for discounted product	According to a study conducted by (Grewal, Krishnan, Baker and Borin

	(1998), Van Putten et al. (2008), and Huang and Yang, 2015), respondents were shown different statements which were measured using a 7-point Likert scale (ranging from "1=Not at all agree" and "7=Strongly agree"), they were asked to rate the following statements according to their likelihood of buying one discounted product item for its full price, for example, "I would buy the product in the current situation", "The product is not a very good buy for money", "There is a high probability that I would consider buying the product".

Table 1. Variables Measurements

Time Pressure

Different methods have been employed in the past for manipulating time. The effects of "no time pressure" and "time pressure" were compared in some research (Barrett, Vessey, & Mu, 2011). Another study, however, used four alternative time constraints: "No time pressure," "60 seconds time range," "30 seconds time range," and "15 seconds time range" (Schmitt, Buisine, Aoussat, & Vernier, 2012)

Therefore, the researcher will follow the method used by (1972; Baer & Oldham, 2006; Andrews & Farris) and will set two different time ranges, 5 days left for little pressure and 2 hours left for high pressure.

Purchase Intention

Other studies have also suggested to measure purchase intention through a Likert scale, for instance in a study conducted by Zeelenberg, respondents circled their choice ("buy the jacket in the promotion now" or "not buy the jacket in the promotion now") and then indicated the strength of their preference for the selected option on a

7-point scale ranging from 1-weak preference to 7-strong preference (Zeelenberg et al. 1996).

Anticipated Regret

Anticipated regret can be measured through an 8-point scale or 7-point scale. The following five statements adapted from (Brehaut, O'Connor, Wood, Hack, Siminoff, Gordon and Feldman-Stewart , 2003) will be used in a randomized order "I would feel bad buying the product," "I would feel upset that I bought the product in this situation "I would regret my purchase on the product that I wanted **",**"I would feel sorry for buying the product in the current situation," and "I would know that I made a bad decision buying the product. In a similar manner, respondents were asked to assess these five assertions on a 7-point Likert scale, with 1 being (Not at all agree) and 7 (Strongly Agree).

Discounts

To measure the effect of discounts on anticipated regret and the consumer's willingness to buy, the respondents will be presented one out of four conditions, two conditions include no discounted products and two conditions include it. Since time pressure acts as a moderator, the respondents will be informed of the time restriction and the time left to take decisions of purchasing the product or not.

3.3) Experimental Procedure

The experiment has the following organizational structure and is delivered via Qualtrics. The significance of taking part in the experiment is also discussed, to make the participants aware that their completion is crucial for completing the thesis.

3.4) Participants

According to (Eurostat, 2021) users who purchased more online goods for private consumption are those aged between 16-54 years; therefore, that age range will provide a better insight in the survey's responses.
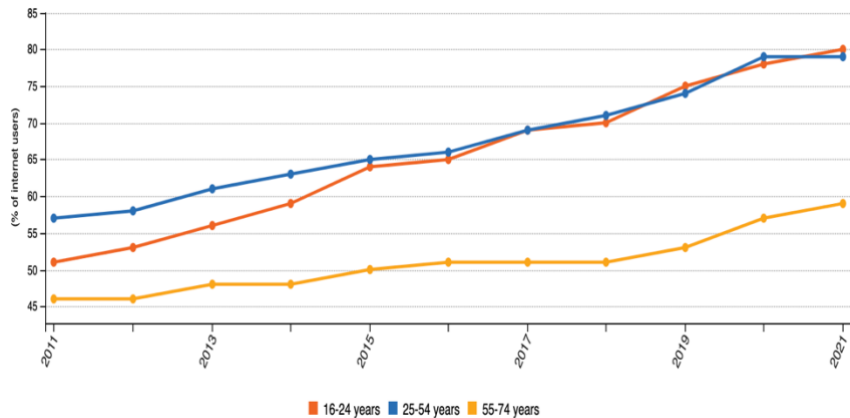
Graph 1. Eurostat: Internet Users who bought or ordered goods or services for private use in the 12 months by age group, EU, 2011-2021

It is expected that frequent buyers know how to find and analyze different deals therefore, they will provide a better insight to the research when answering the survey questions. The target group is not chosen according to different demographic segmentation criteria such as income, occupation, nationality, or education. English is the language used in the survey, making it possible to reach people across borders. The researcher will focus on sending the survey to random participants. The survey will be distributed through social media platforms such as Instagram and WhatsApp.

3.5) Research and Questionnaire Design

To test the effect of the independent variable on the dependent variables, a 2 (Price discount/ no price discount) x2 (Little time-pressure 5 days/ high-time pressure 2 hours) ANOVA between-design subjects with the independent variables price discounts and the moderator time pressure will be used.

The survey consists of four conditions, each condition has 13 close-ended questions and to manipulate the variables time pressure, price discounts vs no discounts, anticipated regret, and purchase intention, the survey follows an Experimental Vignette Methodology design (EVM) (Aguinis & Bradley, 2014), where respondents are expected to make decisions based on a realistic shopping scenario. Moreover, each condition contains one attention check and one manipulation check. The survey is designed with a randomizer such that only one condition will be presented to the respondent. The four conditions possible were the following:

-Discounted jeans with price available for 2 hours

-Discounted jeans with price available for 5 days

-Non-Discounted jeans with price available for 2 hours

-Non-Discounted jeans with price available for 5 days

The researcher followed the method used by (1972; Baer & Oldham, 2006; Andrews & Farris) and will set two different time ranges, 5 days left for little pressure **(**Block 1 and Block 2), 2 hours left for high pressure (Block 3 and Block 4).

To measure purchase intention for discounted products, according to a study conducted by (Grewal, Krishnan, Baker and Borin (1998), Van Putten et al. (2008), and Huang and Yang, 2015), respondents were shown different statements which were measured using a 7-point Likert scale (ranging from "1=Not at all agree" and "7=Strongly agree"), they were asked to rate the following statements according to their likelihood of buying one discounted product item for its full price, for example, "I would buy the product in the current situation," **(Q1, Q14, Q27, Q40)** "There is a high probability that I would consider buying the product," **(Q2, Q15, Q28, Q41).**

To measure anticipated regret, the following five statements adapted from (Brehaut, O'Connor, Wood, Hack, Siminoff, Gordon and Feldman-Stewart , 2003) were used in a randomized order "I would feel bad buying the product**,"(Q3, Q16, Q29, Q42)** "I would feel upset that I bought the product in this situation**,"(Q4, Q17, Q30,Q43)** "I would regret my purchase on the product that I wanted, " **(Q5, Q18, Q31,Q44)** "I would feel sorry for buying the product in the current situation,"**(Q7,Q20,Q33,Q46)** and "I would know that I made a bad decision buying the product," **(Q8,Q21,Q34,Q47)**. In a similar manner, respondents were asked to assess these five assertions on a 7-point Likert scale, with 1 being (Not at all agree) and 7 (Strongly Agree).

To measure the effect of discounts on anticipated regret and the consumer's purchase intention, only 2 conditions will have the discounted jeans with the two levels of time pressure **(Block 2 and Block 4)** while the other two conditions will show the jeans with a non-discounted price available for the two levels of time pressure **(Block 1 and Block 3)**.

Chapter 4: Data Analysis and Results

4.1) Data collection and manipulation check

Data collection for target group started from January 27th and ended on February 6th. Participants were recruited on online platforms such as WhatsApp and social media like Instagram **(See Appendix 1)** Participants could click on the link to enter the online survey platform and participate. In total, 212 participants completed the survey. However, it is important to mention that there were participants who clicked on the link but decided not to proceed with the survey completion.

Manipulation checks were carried out to ensure that respondents were engaged and attentive during the survey as well as to determine whether the assigned manipulations would function as planned.

Specifically, to determine if participants experienced time pressure when considering purchasing the jeans or not according to each of the four conditions, they were asked "How did the jeans purchase decision according to the previous scenario made you feel? Five possible answers were given, "Motivated", "Happy", "stressed", "annoyed" and "other".

The survey included one attention check in each of the 4 blocks, the participants who failed to answer the attention check correctly were around 25 respondents, 25/212= 11%. Since the rate is considered low, the author decided not to exclude those who failed to answer the attention check correctly.

4.2) Descriptive Statistics

Since the design of the study is between subject design, the author established four different conditions, in which participants were assigned to one condition randomly.

Overall, most responses collected were from respondents identifying themselves as females, with the minority of responses to be collected from "non-binary/third gender" and "prefer not to say". **(See Appendix 2)**

Gender

Gender	*Frequency*	Percent	Valid Percent	Cumulative Percent
Male	90	41.3	42.3	42.3
Female	120	55.0	56.3	98.6
Non-Binary	2	.9	.9	99.5
Prefer not to say	1	0.5	0.5	100.0
Missing	5	2.3		
Total	218	100.0		

Table 2. Gender descriptive statistics

Table 3 summarizes age frequencies. Overall, the age range who answered the questionnaire were respondents older than 17 years old. Based on the age frequencies conducted on SPSS, only 6 participants were above 54 years old.

Age

Age	*Frequency*	Percent	Valid Percent	Cumulative Percent
17-30 years	141	64.7	66.2	66.2
31-54 years	66	30.3	31.0	97.2
Over 54 years	6	2.8	2.8	100.0
Missing				
Total	218	100.0		

Table 3. Age Descriptive Statistics

Table 4 summarizes level of qualification frequencies. It can be observed that out of 212 participants, bachelor was the highest level of qualification that 108 participants obtained, being none the one that occurred the least.

Level of Qualification

Level	Frequency	Percent	Valid Percent	Cumulative Percent
High School	30	13.8	14.1	14.1
Bachelor	108	40.5	50.7	64.8
Master	73	33.5	34.3	99.1

None	2	.9	.9	100.0
Missing	5	2.3		
Total	218	100.0		

Table 4. Level of qualification Frequencies

4.3) Factor Analysis

Before proceeding with Hypothesis testing, the researcher conducted a factor analysis and a reliability analysis Cronbach Alpha **(See Appendix 3).**

In this research, to measure anticipated regret on a 7-point Likert Scale, the researcher asked the following questions on the survey, "I would feel bad buying the product" coded as bad feeling, "I would feel upset that I bought the product in this situation" coded as upset, "I would regret my purchase on the product that I wanted coded as regretful, "I would feel sorry for buying the product in the current situation" coded as pity and "I would know that I made a bad decision buying the product" coded as bad decision.

To measure purchase intention on a 7-point Likert Scale, the researcher asked the following questions on the survey, "I would buy the product in the current situation" coded as purchase and "There is a high probability that I would consider buying the product" coded as probability buy.

According to the theory introduced by Kaiser (1974) for the sample to be adequate the Kaiser Meyer Olkin (KMO) needs to be close to 0.5, while values between 0.7-0.8 are acceptable.

KMO and Bartlett's Test

Variable	KMO Measure of Sampling	Sig	Df
Anticipated Regret	0.865	<0.001	10
Purchase Intention	0.500	<0.001	1

Table 5. KMO for Anticipated Regret and Purchase Intention

By testing all the questions per variable, the researched concluded that KMO were equal to or higher than 0.5, therefore it can be stated that all responses collected were adequate to measure the variables.

The reliability of scales was tested by examining Cronbach's Alpha **(See appendix 3)**. For the values to be considered acceptable, they should be above 0.6 or 0.7. However, the higher, the more reliable the internal consistency of the variables.

Reliability Analysis for Anticipated Regret and Purchase Intention

Variable	**Cronbach's Alpha**	N of Items
Anticipated Regret	**0.890**	5
Purchase Intention	**0.753**	2

Table 6. Reliability Statistics

After the tests conducted above, it can be concluded that all items measuring the variables are reliable, since they're higher than 0.7 which is the benchmark to accept reliability based on Cronbach's Alpha.

Since both the mediator and dependent variable were measured on a 7-point Likert scale, the researcher ran a factor analysis. The rotated component matrix will demonstrate the factor loadings and allow to interpret which traits the components might reflect.

Rotated Component Matrix

	Component 1	Component 2
Purchase	-0.329	0.832
Probability Buy	-0.60	0.891
Bad Feeling	0.762	0.084
Upset	0.852	-0.247
Regret	0.832	-0.304
Pity	0.884	-0.257
Bad Decision	0.780	-0.404

Table 7. Rotated Component Matrix

The rotated component matrix above will be used to identify the variables that belong to each factor. As a rule of thumb, variables with loading higher than 0.5 should be kept.

The first component with factors larger than 0.5 such as Bad Feeling, Upset, Regret, Pity and Bad decision are related to anticipated Regret and the factor with strongest relation is pity (0.884) and the least is Bad Feeling (0.762). In the second component, factors larger than 0.5 are Purchase and Probability Buy which are related to purchase intention and the factor with strongest relation is Probability Buy (0.891) and the least is purchase (0.832).

4.4) Purchase intention descriptive statistics

The author wanted to examine the descriptive of the consumer's purchase intentions assigned to each condition.

First condition: Discounted jeans with discount available for 5 days

Bar chart below indicates that overall, 25% of the respondents who were assigned to the first condition agreed that they would buy the product in the current situation (50%), while no participant indicated "somewhat disagree".
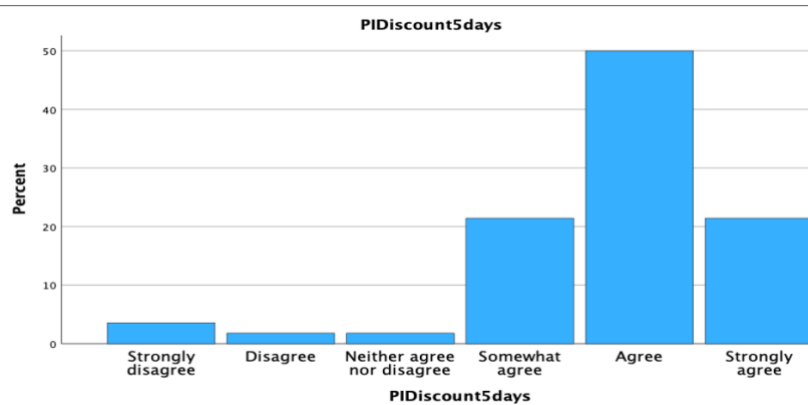
Graph 2. PI Discount 5 Days

Second condition: Discounted jeans with discount available for 2 hours

27% of the respondents assigned to the second condition indicated that they agreed they would buy the product in the current condition (44%), while no participant responded unfavorably (strongly disagree).
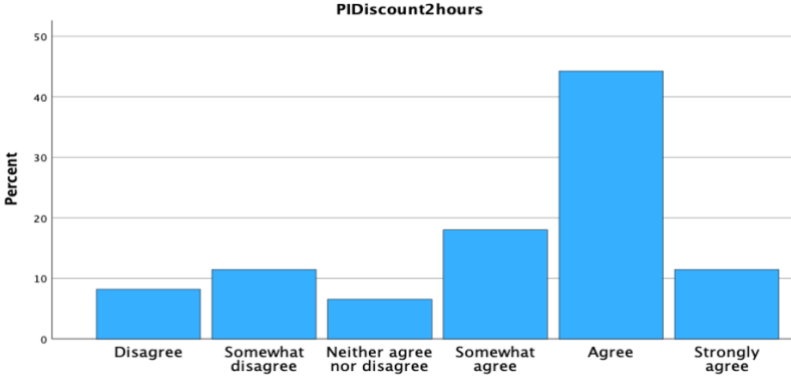
Graph 3. PI Discount 2 hours

Third condition: non-discounted jeans with price available for 2 hours

22% of the respondents assigned to the third condition, answered negatively towards the purchase intention of the non-discounted jeans (51%). On the other hand, only 12% answered positively to the purchase intention of the non-discounted jeans.
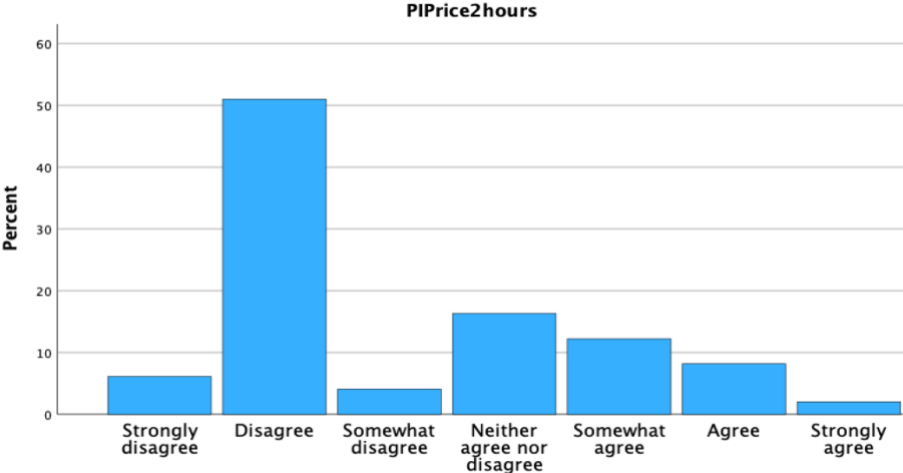
Graph 4. PI for price available 2 hours

Fourth condition: non-discounted jeans with price available for 5 days

22% of the respondents assigned to the fourth condition, answered negatively to the purchase intention of the non-discounted jeans (35%) while 25% of the respondents agreed they would buy the non-discounted jeans with a price available for 5 days.
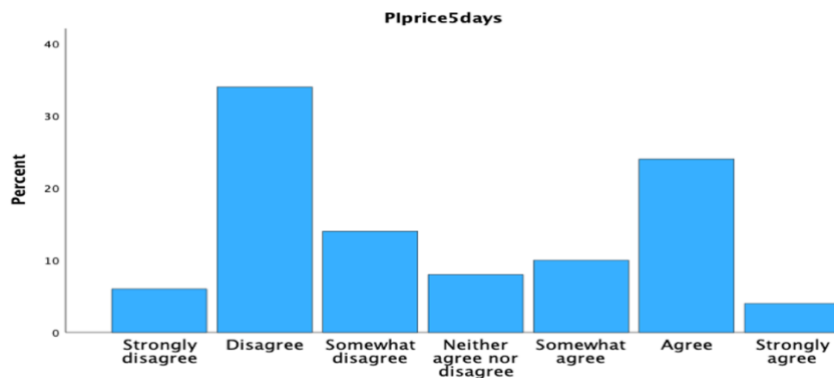
Graph 5. PI for price available 5 days

4.5) Hypothesis Testing

In this part of the research, all the hypotheses tested in SPSS will be demonstrated. To test all hypotheses, the researched followed PROCESS macro 4.2 by Andrew Hayes, precisely, model 7. During the analysis, mediation analysis was produced. This model involves testing for the indirect effect of discounts on purchase intention via anticipated regret with the indirect effect being moderated by time pressure. In the PROCESS macro 4.2 matrix, anticipated regret is coded as "AR" and purchase intention as "PI". **(See Appendix 4)**

H1: Purchase intention for discounted products is higher than non-discounted products.

The hypothesis is being analyzed after running an independent T-test which main goal is to compare the means between two independent groups, being one exposed to the discounted jeans while the other, exposed to the non-discounted jeans. (**See Appendix 5).**

The independent variable discount is a categorical variable where "1" is being coded as discounted product and "0" is being coded as non-discounts. Therefore, group 1 will be those exposed to discount, while group 2 will be those who were not exposed to the discount.

The researcher obtained the following output:

Group Statistics

Independent Variable	N	Mean	Standard Deviation
Discount	116	5.43	1.385
Non-Discount	96	3.39	1.743

Table 8. Group Statistics

For Discount, there are sample sizes of N=116 and for non-discount N=96. Second, discount resulted in the highest mean, while non-Discount has the highest standard deviation.

Independent Samples T-test

Purchase Intention	F Statistic	Sig	T-Statistic	Degrees of Freedom	*Significance P-value*
Equal Variances Assumed	18.573	<0.001	9.521	210	<0.001
Equal Variances Not Assumed			9.319	179.628	<0.001

Table 9. Independent Samples T-test

One- Way ANOVA

Purchase Intention	Degrees of Freedom	F-Statistic	Significance
Between Groups	1	90.653	<0.001
Within Groups	210		
Total	211		

Table 10. One- Way ANOVA

From the charts above, the significance is 0. Assuming a significance level of 5%, 0<5%, there is enough evidence to reject the null that the variances of the two groups are equal.

The P-value (0.001) is 0.01% <5%. In other words, there is enough evidence to reject the null hypothesis, in other words, the means are significantly different $F_{(1,210)}$ = 90.65, P=0.001.

The discount conditions resulted in different mean weights for the purchase intention **F (1,210) = 90.65, P=0.001.**

Respondents' purchase intention of discounted products is higher than those exposed to non-discounted products.
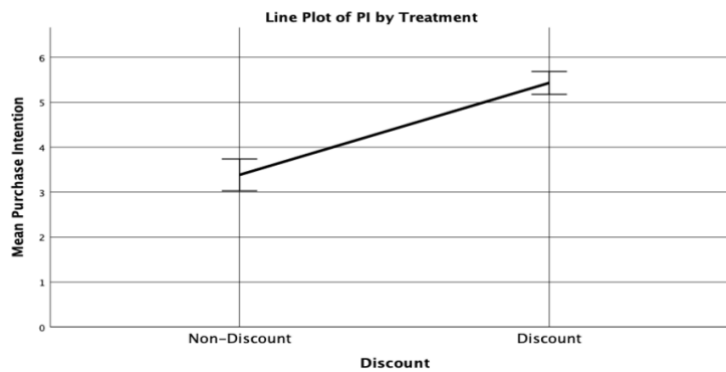
Graph 6. Mean PI for Discount Type

In the line plot above, it can be observed that the spread of observations for discounts are much greater than the spread of observations for non-discounts. Also, it can be estimated that the variances for these two groups are different.

In other words, purchase intention for discounts is higher than that of non-discounts. Hence, H1 is supported.

Additionally, to test the direct effect of x on y, a macro process model 7 was run and the researcher obtained the following output:

Direct Effect of Discounts on Purchase Intention

Effect	P-value	Boot LLCI	Boot ULCI
1.40	*0.00*	1.04	1.75

Table 11. Direct Effect of X on Y

The direct effect of discounts on purchase intention is positive and statistically significant, assuming a significance level of 5%, 0<5%.

H2: Anticipated regret for discounted products is higher than non-discounted products.

To test hypothesis 2, the researcher analyzed the following information extracted from the moderation mediation analysis. **(See Appendix 4)**

Outcome Variable: Anticipated Regret

	Coefficient	*P-Value*	Boot LLCI	Boot ULCI
Discount	-0.66	**0.03**	-1.25	-0.08

Table 12. Anticipated Regret

According to the output above, the direct effect of discounts on anticipated regret Is negative (-0.66) and statistically significant, assuming a significance level of 5%, P-value=0.03, 3%<5%.
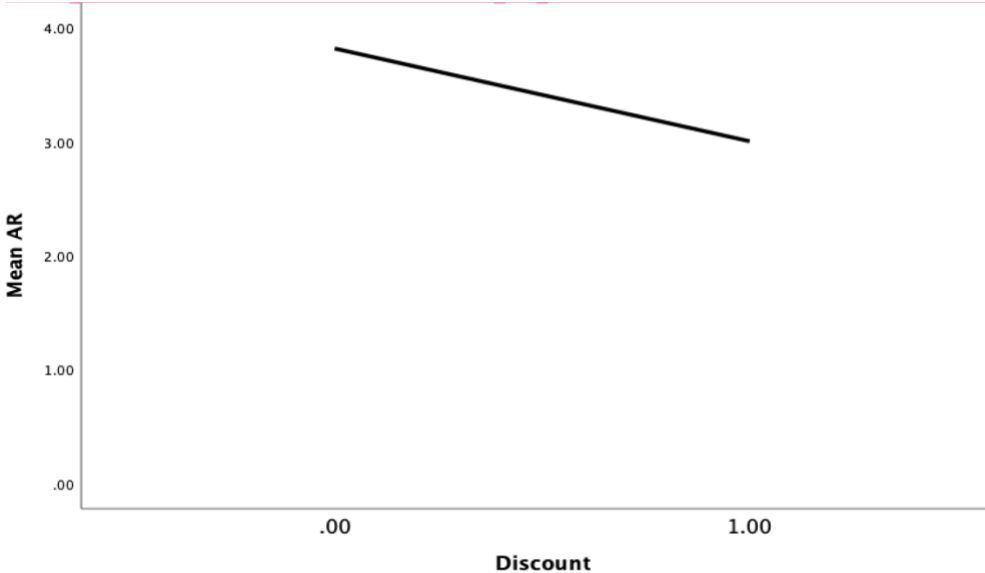
Graph 7. Mean AR for Discount Type

The line plot above, is coded such as when Discount=0, the respondents were not exposed to the discounted jeans, while Discount=1 indicates that respondents were exposed to the discounted jeans. Respondents were assigned to one of four conditions with discounted jeans or non-discounted jeans across two different levels of the moderating variable, time pressure. The line plot above has negative slopes indicating the following:

Anticipated Regret for Discounts

Discount 0=No, 1=Yes	Anticipated Regret
0- No Discount	-3.8

1- **Discount**	**-3.1**

Table 13. AR for Discounts

Anticipated regret for discounts is closer to 0, (Discount= -3.1 and non-discount =-3.8). From the information above, it can be concluded that anticipated regret is higher for discounted products than non-discounted products.

Therefore, H2 is supported.

H3a: Time pressure moderates the effect of discounts on consumer's regret, such when time-pressure is high, the effect of the discount on anticipated regret is increased.

The moderating variable, time pressure was defined as two levels. High time pressure= 2 hours and low time pressure = 5 days. Low time pressure was coded as "0" while high time pressure was coded as "1".

Pairwise Contrasts between conditional indirect Effects

Effect 1	Effect 2	*Boot LLCI*	*Boot ULCI*
0.34	0.23	*-0.18*	*0.42*

Table 14. Pairwise Contrasts

The output above shows tests contrasting the indirect effect involving different levels of the moderator (High time pressure vs low time pressure).
The difference between the indirect effect at the mean of the moderator (IE=0.34) and at -1SD of the moderator (IE=0.23) is not statistically significant since the null of 0 falls within the bootstrap 95% interval confidence, Boot LLCI=-0.18 and Boot ULCI= 0.42.

The line plot above suggests that for high time pressure, the slope for the relationship between discount and anticipated regret is less negative among those individuals exposed to low time pressure. Therefore, it can be inferred that anticipated regret for a discounted product is higher when there is high time pressure when compared to low time pressure.
Also, the graph above suggests the following:
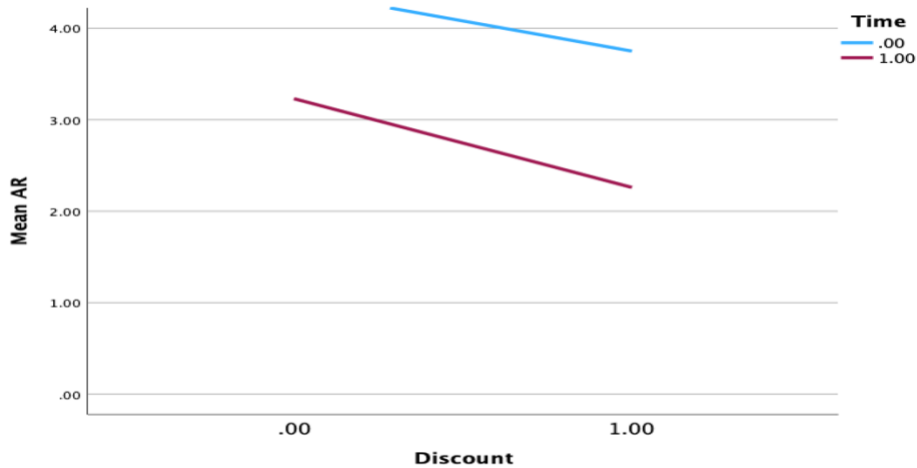
Graph 8. Mean AR for Levels of Time Pressure and Discount Type

Anticipated Regret for Time Pressure and Discount Type

Discount 0=No, 1=Yes	Anticipated Regret
0- No Discount x Low time Pressure	-4.3
1- **Discount** x Low Time Pressure	**-3.7**
0- No Discount x High Time Pressure	-3.3
1- **Discount** x High Time Pressure	**-2.3**

Table 15. AR for Time pressure and Discount Type

Anticipated regret for discounts is closer to 0, (Discount x Low Time pressure= -3.7, Discount x High Time pressure= -2.3) for all different levels of time pressure, therefore, there is enough evidence to accept H3A which suggests that when time pressure is high (2 hours), the effect of discount on anticipated regret is increased.

H3b: The impact of product discounts on consumer's purchase intention of the time-limited discount product is mediated by anticipated regret.

To test the hypothesis above, the following information was extracted:

Mediation Effects

Effect	Estimate	SE	P	% Mediation
Direct	1.40	0.18	0.00	71%
Indirect	0.57	0.24	0.00	29%

Total	1.97	0.42	0	100%

Table 16. Mediation Effects

Path Estimates

Path	Estimate	SE	P
Discount ➡ Anticipated Regret ➡ Purchase Intention (Indirect)	0.57	0.24	0.0
➡ Discount Purchase Intention (Direct)	1.40	0.18	0.0

Table 17. Path Estimates

A series of regression analyses were carried out to test the hypothesis above. The result show that time-limited discounts positively predict purchase intention (B=1.97, SE=0.42, P=0). Analyzing the indirect effects, results reveal that anticipated regret significantly mediates the relationship between time-limited discounts and purchase intention (B=0.57, P= 0<5%) assuming a significance level of 5%. Analyzing the direct effect, results reveal that time-limited discounts positively affect purchase intention (B=1.40, P=0<5%) assuming a significance level of 5%.

According to the % mediation, anticipated regret accounts for 29% of the total effect. These findings provide evidence that anticipated regret plays an important role in purchase intention of time-limited discounts.

Therefore, H3B is supported.

H4: Purchase intention of a discounted product is influenced by anticipated regret.

Outcome Variable: Purchase Intention

	Coefficient	P-value
Constant	5.16	0.00
Discount	1.40	0.00
Anticipated Regret	-0.35	0.00

Table 18. Purchase Intention

The direct effect of discount on purchase intention is positive (1.40) and statistically significant, P-value =0, 0<5% while anticipated regret has a negative slope (-0.35) but it's statistically significant P-value=0, 0<5%.

Indirect effect: Discount ⟶ Anticipated regret ⟶ Purchase Intention

Indirect Effect

Time	Effect	Boot LLCI	Boot ULCI
0-High Pressure	0.23	0.01	0.50
1-Low Pressure	0.34	0.15	0.58

Table 19. Indirect Effect

The conditional indirect effect when time=0 high time pressure is statistically significant (Boot LLCI=0.01, Boot ULCI=0.50), however, the conditional indirect effect when time=1 low time pressure is not statistically significant (Boot LLCI= 0.15, Boot LLCI=0.58).

In conclusion, H4 is supported.

4.6) Overview of Hypothesis

Hypothesis	Status
H1: Purchase intention for discounted products is higher than non-discounted products.	Supported
H2: Anticipated regret for discounted products is higher than non-discounted products.	Supported
H3a: Time pressure moderates the effect of discounts on consumer's regret, such when time-pressure is high, the effect of the discount on anticipated regret is increased.	Supported
H3b: The impact of product discounts on consumer's purchase intention of	

the time-limited discount product is mediated by anticipated regret.	Supported
H4: Purchase intention of a discounted product is influenced by anticipated regret.	Supported

Table 20. Overview of Hypotheses

Chapter 5. Discussion and Conclusion

According to (Hanna et al., 2016) limited time discounts have shown to be a very effective type of promotion.

Previous studies have suggested that time limited promotions will influence the purchase intention in a positive manner, the impact on the intent to continue searching for deals, purchase intention and attitude to the deal, however, research on external factors is lacking. Therefore, this research provides a framework by examining the role of anticipated regret on time limited discounts and purchase intention with the moderating variable, time pressure.

Therefore, the following research question was studied:

What is the influence of anticipated regret on the purchase of time-limited discounted products?

5.1) Anticipated Regret

Anticipated regret acts as an external and mediating variable that impacts the purchase intention of time-limited discounts.

Prior research indicates that consumers are more inclined to buy something if they fear regret over losing a chance to save money (Inman and McAlister 1994; Simonson 1992) and post-choice, non-buyers will suffer more regret than buyers who, by buying, can prevent the loss and any emotions of regret.

Shorter time limits improve purchase intent by fostering a sense of "urgency," which is defined as a perceived need to start and finish an action in the current or near future (Sinha 1999).

Therefore, hypothesis 2 studied whether anticipated regret for discounted products was higher than non-discounted products.

Since significant differences were found, present study can confirm this effect.

Moreover, other studies have suggested that customers aim to reduce any unfavorable emotions they may feel following a purchase decision (Bagozzi et al.,2016) and Consumers attempt to reduce the potential of regret while making a purchase. (Bell, 1982), therefore, the researcher studied whether there was a positive relation between anticipated regret and purchase intention, like H4 suggests "Purchase intention is influenced by anticipated regret". The relation showed to be significant, therefore, the

suggested mediating role of anticipated regret on the relationship between time-limited discounts and purchase intention could be examined. This was done by hypothesis 3B which suggests "The impact of product discounts on consumer's purchase intention of the time-limited discount product is mediated by anticipated regret".

Since significant results were found, the suggested mediating role for anticipated regret can be confirmed. Therefore, it can be concluded that anticipated regret influences consumer's purchase intention of the discounted product.

5.2) Time-limited Discounts

Prior research suggested that according to (Fill 2002) marketing tactics such as price discounts have a higher significant influence on consumers' willingness to buy and (Schindler 1998) also found that price discounts could make customers feel excited and powerful, (Honea and Dahl 2005, Peine et al 2009) promotion increased customers' positive affect, such as happiness. Since time-limited discounts generates positive emotions, H1 suggests that purchase intention for discounted products is higher than purchase intention for non-discounted products.

Since significant difference was found, it can be concluded that non-discounted products and discounted products within this study differ in purchase intention. Therefore, present study can support a direct effect of purchase intention of discounted products.

5.3) Time pressure

To test the moderating variable, time pressure, previous research suggested that when the time allotted is less than the time the decision maker needs to make the decision, or when the decision maker is given a short amount of time to make the decision, the decision maker may feel under pressure, and this could affect the quality of their decision-making and their choice of strategies (Ordonez and Benson 1997) and limited purchasing possibilities are different from time constraints in that customers have plenty of time to assess information, but they are still a form of scarcity because they restrict the amount of time they must act on that information (Payne, Bettman, and Johnson 1993). Therefore, H3A suggested that time pressure moderates the effect of discounts on consumer's regret, such when time-pressure is high, the effect of the

discount on anticipated regret is increased. In other words, present study expected a moderating effect of time pressure on the relationship between time-limited discounts and anticipated regret. Results indicate a significant result, anticipated regret for a discounted product is higher when there is high time pressure when compared to low time pressure. Therefore, there is moderation between of time pressure on the relationship between time-limited discounts and anticipated regret.

5.4) Managerial Implications

Previous studies have suggested (Zeelenberg, van Dijk, and Manstead 1998a; Zeelenberg et al. 1998b, 1998c) that regret is greater for those decisions over which one had control than for those decisions over which one had little control.

Therefore, many brands struggle with establishing long-term relationships with regret averse customers who have purchased a discounted product, but the discounts have expired or with those customers who are experiencing regret post-purchase and have a negative image about the brand.

In this research based on the responses collected, the author concluded that respondents:

- Are more prone to purchase discounted products with higher time frame from expiration date vs those with lower time frame from expiration date.
- Purchase intention is higher for discounted products.

Moreover, since it can be concluded that purchase intention for discounted products is higher, to increase sales, managers should consider different pricing strategies according to the product and its size, for instance bonus packs i.e., "buy one, get one free", "40% extra free" or get 10 0z more than the original price". This type of discount will allow consumers to view the purchase as a gain, rather than as a loss, while their anticipated regret is likely to increase when evaluating different deals and choosing the best, their post-purchase regret is likely to decrease.

Another strategy managers can consider in order to increase sales are free shipping costs, advertising the discounts in advance, increasing their marketing expenditure if deemed as necessary, so customers can find out about the deal with a higher time frame and not at the last moment since last minute purchases are likely to increase

post-regret purchase due to little time which result in poor decisions and negative brand image.

To reduce negative association with a brand when consumers regret their purchase or a missed opportunity, it is important that brands offer detailed information about the product whether it's on discount or not and implement a favourable exchange and return policy.

5.5.) Academic Implications

Current study builds upon existing research by providing a framework which considers different internal and external variables of time-limited discounts and purchase intention. It provides a deeper insight of how time-limited discounts affect consumer buying behavior. It is the first study to examine a moderated mediation which provides an understanding in the effects of the time pressure on purchase intention of the time-limited discounts and customers' feelings of anticipated regret.

5.6) Limitations and suggestions for future research

This study has some limitations that can be used as a basis for further analysis and investigation.

The limitations are the following:
- Sample Size
- Product type and discounts
- Different moderators and mediators

The participants were reached via WhatsApp and Instagram; therefore, the sample size was quite limited. More responses could have been collected if the respondents were reached through other platforms and if more time would have been available for the collection of more responses. Moreover, most of the participants in this research were younger than 54 years old. There is a possibility of improvement in future research if the researcher studies consumer emotions such as anticipated regret on consumers who have offline buying patterns, to gain a better insight of how purchase intention varies according to habits and ages.

The second limitation refers to product type and discounts. For this study, the researcher focused on two possible product pricing strategies, discount vs non-discount. There are other types of pricing strategies that can be considered in future research, for instance, free gifts, coupons, gift cards among others. Moreover, the product type also influences purchase intention, for instance, a consumer might not be willing to pay the non-discounted price for a jeans but they are willing to do so for a dress according to personal preferences and opinions. Also, consumers might not be willing to pay for the discounted jeans because they can consider that the level of discount is too low, so level of discounts also play an important role. Therefore, future researchers should consider how anticipated regret can vary across different types of pricing strategies, different type of products and level of discounts whether is low or high.

The third limitation refers to mediators and moderators. Time pressure, the moderator in this research was a limitation because the researcher only included two levels of time pressure, high and low. Moreover, future research can study customer's purchase intention for more time pressure levels. Another moderator that can be studied is level of product involvement along with the existing mediator, anticipated regret. Future research can also examine different possible mediators, choice deferral, post- regret or product quality.

These improvements could lead to different conclusions about how different pricing strategies can lead to higher purchase intentions and decrease negative emotions associated with a purchase.

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7) Appendix

7.1) Appendix 1: Online Survey

Condition 1: Discounted jeans with discount available for 5 days

Your Favorite Brand

Imagine the scenario above. You need a pair of jeans and you are scrolling through your favorite's brand website and would like to buy the jeans in the image above which discount ends in 5 days. Please answer the following statements according to the scenario described.

Q1 I would buy the product in the current situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q2 There is a high probability that I would consider buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q3 I would feel bad buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q4 I would feel upset that I bought the product in this situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q5 I would regret my purchase on the product that I wanted

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q6 This is an attention check. Please respond the following question with " Slightly likely".

○ Extremely unlikely (1)

○ Moderately unlikely (2)

○ Slightly unlikely (3)

○ Neither likely nor unlikely (4)

○ Slightly likely (5)

○ Moderately likely (6)

○ Extremely likely (7)

Q7 I would feel sorry for buying the product in the current situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q8 I would know that I made a bad decision buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q9 How did the jeans purchase decision according to the previous scenario made you feel?

○ Motivated (1)

○ Stressed (2)

○ Happy (3)

○ Annoyed (4)

○ Other (5)

Q10 What is your gender?

○ Male (1)

○ Female (2)

○ Non-binary / third gender (3)

○ Prefer not to say (4)

Q11 Please select your age group

○ Under 17 years old (1)

○ 17-30 years old (2)

○ 31-54 years old (3)

○ Over 54 years old (4)

Q12 Please indicate your level of qualification

○ High School (1)

○ Bachelor (2)

○ Master (3)

○ None (4)

Q13 Please indicate in which country you currently reside in

Condition 2: Discounted jeans with discount available for 2 hours

Imagine the scenario above. You need a pair of jeans and you are scrolling through your favorite's brand website and would like to buy the jeans in the image above which discount ends in 2 hours. Please answer the following statements according to the scenario described.

Q14 I would buy the product in the current situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q15 There is a high probability that I would consider buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q16 I would feel bad buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q17 I would feel upset that I bought the product in this situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q18 I would regret my purchase on the product that I wanted

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q19 This is an attention check. Please respond the following question with " Slightly likely".

○ Extremely unlikely (1)

○ Moderately unlikely (2)

○ Slightly unlikely (3)

○ Neither likely nor unlikely (4)

○ Slightly likely (5)

○ Moderately likely (6)

○ Extremely likely (7)

Q20 I would feel sorry for buying the product in the current situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q21 I would know that I made a bad decision buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q22 How did the jeans purchase decision according to the previous scenario made you feel?

○ Motivated (1)

○ Stressed (2)

○ Happy (3)

○ Annoyed (4)

○ Other (5)

Q23 What is your gender?

○ Male (1)

○ Female (2)

○ Non-binary / third gender (3)

○ Prefer not to say (4)

Q24 Please select your age group

○ Under 17 years old (1)

○ 17-30 years old (2)

○ 31-54 years old (3)

○ Over 54 years old (4)

Q25 Please indicate your level of qualification

○ High School (1)

○ Bachelor (2)

○ Master (3)

○ None (4)

Q26 Please indicate in which country you currently reside in

Condition 3: Non-discounted jeans with price available for 2 hours

Your Favorite Brand

Imagine the scenario above. You need a pair of jeans and you are scrolling through your favorite's brand website and would like to buy the jeans in the image above which is currently priced at 60€ and the price will be available for 2 hours. Please answer the following statements according to the scenario described.

Q27 I would buy the product in the current situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q28 There is a high probability that I would consider buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q29 I would feel bad buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q30 I would feel upset that I bought the product in this situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q31 I would regret my purchase on the product that I wanted

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q32 This is an attention check. Please respond the following question with " Slightly likely".

○ Extremely unlikely (1)

○ Moderately unlikely (2)

○ Slightly unlikely (3)

○ Neither likely nor unlikely (4)

○ Slightly likely (5)

○ Moderately likely (6)

○ Extremely likely (7)

Q33 I would feel sorry for buying the product in the current situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q34 I would know that I made a bad decision buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q35 How did the jeans purchase decision according to the previous scenario made you feel?

○ Motivated (1)

○ Stressed (2)

○ Happy (3)

○ Annoyed (4)

○ Other (5)

Q36 What is your gender?

○ Male (1)

○ Female (2)

○ Non-binary / third gender (3)

○ Prefer not to say (4)

Q37 Please select your age group

○ Under 17 years old (1)

○ 17-30 years old (2)

○ 31-54 years old (3)

○ Over 54 years old (4)

Q38 Please indicate your level of qualification

○ High School (1)

○ Bachelor (2)

○ Master (3)

○ None (4)

Q39 Please indicate in which country you currently reside in

Your Favorite Brand

EU 32 / US 0
EU 34 / US 2
EU 36 / US 4
EU 38 / US 6
EU 40 / US 8
EU 42 / US 10
EU 44 / US 12
EU 46 / US 14

SIZE GUIDE

60 €

ADD TO BAG

SHIPPING AND RETURNS

Imagine the scenario above. You need a pair of jeans and you are scrolling through your favorite's brand website and would like to buy the jeans in the image above which is currently priced at 60€ and the price will be available for 2 hours. Please answer the following statements according to the scenario described.

Q40 I would buy the product in the current situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q41 There is a high probability that I would consider buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q42 I would feel bad buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q43 I would feel upset that I bought the product in this situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q44 I would regret my purchase on the product that I wanted

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q45 This is an attention check. Please respond the following question with " Slightly likely".

○ Extremely unlikely (1)

○ Moderately unlikely (2)

○ Slightly unlikely (3)

○ Neither likely nor unlikely (4)

○ Slightly likely (5)

○ Moderately likely (6)

○ Extremely likely (7)

Q46 I would feel sorry for buying the product in the current situation

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q47 I would know that I made a bad decision buying the product

○ Strongly disagree (1)

○ Disagree (2)

○ Somewhat disagree (3)

○ Neither agree nor disagree (4)

○ Somewhat agree (5)

○ Agree (6)

○ Strongly agree (7)

Q48 How did the jeans purchase decision according to the previous scenario made you feel?

○ Motivated (1)

○ Stressed (2)

○ Happy (3)

○ Annoyed (4)

○ Other (5)

Q49 What is your gender?

○ Male (1)

○ Female (2)

○ Non-binary / third gender (3)

○ Prefer not to say (4)

Q50 Please select your age group

○ Under 17 years old (1)

○ 17-30 years old (2)

○ 31-54 years old (3)

○ Over 54 years old (4)

Q51 Please indicate your level of qualification

○ High School (1)

○ Bachelor (2)

○ Master (3)

○ None (4)

Q52 Please indicate in which country you currently reside in

7.2) Appendix 2: Descriptive Statistics

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	90	41.3	42.3	42.3
	Female	120	55.0	56.3	98.6
	Non-binary / third gender	2	.9	.9	99.5
	Prefer not to say	1	.5	.5	100.0
	Total	213	97.7	100.0	
Missing	System	5	2.3		
Total		218	100.0		

Gender Descriptive Statistics

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	17-30 years old	141	64.7	66.2	66.2
	31-54 years old	66	30.3	31.0	97.2
	Over 54 years old	6	2.8	2.8	100.0
	Total	213	97.7	100.0	
Missing	System	5	2.3		
Total		218	100.0		

Age Descriptive Statistics

Level Of Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School	30	13.8	14.1	14.1
	Bachelor	108	49.5	50.7	64.8
	Master	73	33.5	34.3	99.1
	None	2	.9	.9	100.0
	Total	213	97.7	100.0	
Missing	System	5	2.3		
Total		218	100.0		

Level of Qualification Statistics

7.3) Appendix 3: Factor Analysis Rotated Matrix

Rotated Component Matrix[a]

	Component	
	1	2
Purchase	−.329	.832
Probability Buy	−.060	.891
Bad Feeling	.762	.084
Upset	.852	−.247
Regret	.832	−.304
Pity	.884	−.257
Bad Decision	.780	−.404

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.877	−.480
2	.480	.877

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Rotated Component matrix for anticipated Regret and Purchase Intention

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.890	.906	5

Reliability Statistics for Anticipated Regret

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.753	.754	2

Reliability Statistcs for Purchase Intention

KMO and Bartlett's Test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.865
Bartlett's Test of Sphericity	Approx. Chi–Square	749.829
	df	10
	Sig.	<.001

KMO for Anticipated Regret

KMO and Bartlett's Test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi–Square	95.769
	df	1
	Sig.	<.001

KMO for Purchase Intention

7.4) Appendix 4: PROCESS macro 4.2 Moderated Mediation Analysis

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.        www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 7
    Y  : PI
    X  : Discount
    M  : AR
    W  : Time

Sample
Size:  212

**************************************************************************
OUTCOME VARIABLE:
 AR

Model Summary
         R         R-sq        MSE          F        df1        df2          p
       .44          .20       2.33      17.11       3.00     208.00        .00

Model
              coeff         se          t          p       LLCI       ULCI
constant       4.41        .23      19.37        .00       3.96       4.86
Discount       -.66        .30      -2.25        .03      -1.25       -.08
Time          -1.18        .31      -3.78        .00      -1.80       -.57
Int_1          -.30        .42       -.71        .48      -1.14        .54

Product terms key:
 Int_1   :        Discount x        Time

Test(s) of highest order unconditional interaction(s):
      R2-chng          F        df1        df2          p
X*W        .00        .50       1.00     208.00        .48
----------
    Focal predict: Discount (X)
          Mod var: Time      (W)
```

```
        Focal predict: Discount (X)
              Mod var: Time      (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   Discount    Time         AR          .
BEGIN DATA.
        .00         .00        4.41
       1.00         .00        3.75
        .00        1.00        3.23
       1.00        1.00        2.26
END DATA.
GRAPH/SCATTERPLOT=
 Discount WITH      AR        BY        Time       .

************************************************************************
OUTCOME VARIABLE:
 PI

Model Summary
         R        R-sq         MSE          F         df1         df2           p
        .62         .38        1.67      63.69        2.00      209.00         .00

Model
              coeff          se           t           p        LLCI        ULCI
constant       5.16         .24       21.32         .00        4.68        5.64
Discount       1.40         .18        7.66         .00        1.04        1.75
AR             -.35         .05       -6.60         .00        -.46        -.25


***************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
     Effect          se           t           p        LLCI        ULCI
       1.40         .18        7.66         .00        1.04        1.75

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 Discount    ->     AR          ->     PI

       Time      Effect      BootSE    BootLLCI    BootULCI
        .00         .23         .13         .01         .50
       1.00         .34         .11         .15         .58


  Conditional indirect effects of X on Y:

  INDIRECT EFFECT:
   Discount    ->    AR          ->     PI

         Time      Effect      BootSE    BootLLCI    BootULCI
          .00         .23         .13         .01         .50
         1.00         .34         .11         .15         .58

Index of moderated mediation (difference between conditional indirect effects):
          Index      BootSE    BootLLCI    BootULCI
Time        .11         .15        -.18         .42

 Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)
    Effect1     Effect2    Contrast      BootSE    BootLLCI    BootULCI
        .34         .23         .11         .15        -.18         .42

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Moderated Mediation. Pairwise contrasts table indicates the significance of the moderated mediation analysis using the Bootstrap interval levels. The value 0 is not

between BootLLCI and BootULCI hence there is moderated mediation effect, and it is significant.

Appendix 5: Independent T-Test and One Way ANOVA

T-Test

Group Statistics

	Discount	N	Mean	Std. Deviation	Std. Error Mean
Purchase Intention	Discount	116	5.43	1.385	.129
	Non-Discount	96	3.39	1.743	.178

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
						Significance				95% Confidence Interval of the Difference
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Purchase Intention	Equal variances assumed	18.573	<.001	9.521	210	<.001	<.001	2.046	.215	1.622	2.469
	Equal variances not assumed			9.319	179.628	<.001	<.001	2.046	.220	1.612	2.479

Independent T-Test to test H1

Oneway

ANOVA

Purchase Intention

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	219.807	1	219.807	90.653	<.001
Within Groups	509.188	210	2.425		
Total	728.995	211			

One Way ANOVA to test H1